

FRONT LABEL

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- Herbicide

# ROUNDUP® BIACTIVE®

A foliar applied herbicide for the control of annual and perennial grass and broad-leaved weeds before sowing or planting all crops.

For use pre-emergence and pre-harvest in cereals and certain other crops, for destruction of grassland, and use in stubbles, orchards and aquatic areas.

Degraded by micro-organisms/microbes in the soil.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work

This product contains a soluble concentrate containing 360 g/l glyphosate, present as 480 g/l (41.1% ww) of the isopropylamine salt of glyphosate.

Contents **e** XX litres

MAPP Number 10320

PROTECT FROM FROST

Imported

Lot number/production date:

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Not for reformulation or repackaging.  
No licence is granted under any patent.



The Voluntary Initiative

*This label has been produced according to the  
Crop Protection Association Voluntary Initiative (VI) guidance.*

## BACK &amp; BASE LABEL

**ROUNDUP® BIACTIVE®**

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**In case of emergency day or night, telephone National Chemical Emergency Centre: (01865) 407333**

**To avoid risks to man and the environment, comply with the instructions for use**

**IMPORTANT INFORMATION**

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL/AQUATIC HERBICIDE

**Crops/situations:**

Wheat (including Durum wheat), barley, oats, combining peas, field beans;  
Post planting and pre-emergence of wheat, barley, oats, oilseed rape, peas, potatoes, field beans, mustard, linseed, sugar beet, swede, turnip, onion and leek;  
Asparagus;  
Oilseed rape, linseed;  
Mustard;  
All edible crops (stubble), all non-edible crops (stubble);  
Grassland;  
Apple and pear orchards; Cherry, plum and damson orchards;  
All edible and non-edible crops (destruction before sowing/planting).  
Enclosed waters, open waters, land immediately adjacent to aquatic areas.  
Green cover on land not being used for crop production

<b>Maximum individual dose:</b>	}
<b>Maximum number of treatments:</b>	} Full details are given in
<b>Latest time of application:</b>	} the attached leaflet
<b>Other specific restrictions:</b>	} (Crop Specific Information – marked #)

**READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.**

## **SAFETY PRECAUTIONS**

### **Operator protection**

*Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:*

WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate and when handling contaminated surfaces.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES, RUBBER BOOTS when using hand-held sprayers, hand-held rotary atomisers, weed wiper equipment or spot gun equipment.

*However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.*

WASH HANDS AND EXPOSED SKIN before eating and drinking or smoking and after work.

### **Environmental protection**

Do not contaminate water with the product or its container\*. (Do not clean equipment near surface water/avoid contamination from farmyards and roads).

\* except when used as directed

Recommendations apply to the use of this herbicide for the control of weeds growing in or by water and must be read in conjunction with the Official Code of Practice entitled "Guidelines for the Use of Herbicides on Weeds in or near Watercourses and Lakes" obtainable from Department of Environment and Rural Affairs (DEFRA publications 08459 556000), Scottish Executive, Environment and Rural Affairs Department, Department of Agriculture and Rural Development for Northern Ireland and the National Assembly for Wales Agriculture Department.

The Water Act, 1989, The Water Resources Act 1991, the Control of Pollution Act 1974, The Northern Ireland Water Resources Act 1992 and the Control of Pollution and Local Government (Northern Ireland) Order 1978, may apply to the act of applying ROUNDUP BIACTIVE for the control of weeds growing in or by reservoirs and water courses, eg rivers, streams, ditches, drains and ponds/lakes discharging into such water courses.

### **Storage and disposal**

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

KEEP OUT OF REACH OF CHILDREN.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

RINSE CONTAINER THOROUGHLY by using an integrated pressure-rinsing device or manually rinse three times. Add washings to sprayer at time of filling and dispose of safely. Triple rinsed containers may be disposed of as non-hazardous waste.

### **Medical advice**

Medical guidance is available on a 24 hour basis by telephoning the National Chemical Emergency Centre on 01865 407333 or for doctors, from the National Poisons Information Service on 0870 600 6266.

## DIRECTIONS FOR USE

**IMPORTANT:** This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

### Warnings

TAKE EXTREME CARE TO AVOID DRIFT.

DO NOT MIX, STORE OR APPLY ROUNDUP BIACTIVE IN GALVANISED OR UNLINED STEEL CONTAINERS OR SPRAY TANKS.

DO NOT leave spray mixtures in tank for long periods and make sure tanks are WELL VENTED.

Do not apply lime, fertiliser, farmyard manure and pesticides until 5 days after application of ROUNDUP BIACTIVE.

### Restrictions

A period without rain of at least 6 hours and preferably 24 hours must follow application of Roundup Biactive.

Do not spray on weeds where growth is impaired by natural senescence, drought, high temperature, a covering of dust, flooding or severe/prolonged frost at, or immediately after application, otherwise poor control may result.

Do not spray in windy conditions as drift onto desired crops or vegetation can severely damage or destroy them.

Do not tank-mix ROUNDUP BIACTIVE with adjuvants, pesticides or fertilisers, except as specified in the Compatibility section.

### Weeds controlled

Roundup Biactive herbicide controls most emerged grasses and broad-leaved weeds. It is important that all weeds are at the correct growth stage when treated, otherwise some re-growth may occur and this will need re-treatment.

Apply Roundup Biactive herbicide once grasses and broad-leaved weeds have emerged and they have ACTIVELY GROWING green leaves.

- PERENNIAL GRASSES must have full emergence of healthy, green leaf. (Common Couch, for example, becomes susceptible at the onset of tillering and new rhizome growth, which usually occurs when plants have 4-5 leaves, each with 10-15 cm of new growth).

- PERENNIAL BROAD-LEAVED WEEDS are most susceptible around the flowering stage.
- ANNUAL GRASSES AND BROAD-LEAVED WEEDS should have at least 5 cm of leaf, or 2 expanded true leaves, respectively. In set-aside, annual grasses are best treated at full ear emergence, or before stem elongation. Application during the stem extension phase of annual grasses e.g. Black-grass and Brome species on set-aside between the end of April and end of May, may result in poor control and require re-treatment.
- BRACKEN should be treated after frond tips are unfurled, but pre-senescence.
- OTHER SPECIES - recommendations for specific Areas of Use are given in the Recommendation Tables, pages 9-14

Note: The effects of treatment on the long-term control of perennial broad-leaved weeds has not been investigated.

### **Weed resistance strategy**

There is low risk for the development of weed resistance to Roundup Biactive.

Strains of some annual weeds (e.g. Black-grass, Wild oats and Italian Ryegrass) have developed resistance to herbicides which may lead to poor control. A strategy for preventing and managing such resistance should be adopted. This should include integrating herbicides with a programme of cultural control measures. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor, crop adviser or product manufacturer (Monsanto).

Growers are encouraged to implement a weed resistance strategy based on (a) Good Agricultural Practices and (b) Good Plant Protection Practices by:

- Following label recommendations
- The adoption of complimentary weed control practices
- Minimising the risk of spreading weed infestations
- The implementation of good spraying practice to maintain effective weed control
- Using the correct nozzles to maximise coverage
- Application only under appropriate weather conditions
- Monitoring performance and reporting any unexpected results to Monsanto UK Ltd (Tel: 01223 849540)

### **Following crops**

Upon soil adsorption the herbicidal properties of Roundup Biactive are lost permitting the drilling of crops 48 hours after application.

## Crop specific information #

	<b>Maximum individual dose (litres of product/ hectare):</b>	<b>Maximum total dose (litres of product/hectare/ crop/annum):</b>	<b>Latest time of application:</b>
Wheat (including Durum wheat), barley, oats, combining peas, field beans	4.0	4.0	7 days before harvest
Post planting and pre-emergence of wheat, barley, oats, oilseed rape, peas, potatoes, field beans, mustard, linseed, sugar beet, swede, turnip, onion and leek	1.5	1.5	Pre-emergence (ensure spraying precedes ANY crop emergence)
Asparagus	5.0	5.0	Pre-emergence
Oilseed rape and linseed	4.0	4.0	14 days before harvest
Mustard	4.0	4.0	8 days before harvest.
All edible crops (stubble), all non-edible crops (stubble)	5.0  or 1.5	5.0  1.5	5 days before the drilling or planting of the following crop.  2 days before the drilling or planting of the following crop or 24 hours before cultivating.
Grassland	6.0	6.0	5 days before harvest, grazing or drilling
Apple and pear orchards	5.0	5.0	After harvest (post leaf-fall) but before green cluster stage
Cherry, plum and damson orchards	5.0	5.0	After harvest (post leaf-fall) but before white bud stage
All edible and non-edible crops (destruction before sowing/planting).	5.0	5.0 l/ha/year	-
Enclosed waters, open waters, land immediately adjacent to aquatic areas	6.0	-	-
Green cover on land not being used for crop production	6.0	See 'Other Specific Restrictions'	24 hours before cultivating

**Other Specific Restrictions:**

Users must consult the appropriate water regulatory body (Environment Agency/Scottish Environmental Protection Agency) before using the product near water and must obtain their agreement before using this product to control aquatic weeds.

When applying through rotary atomisers, the spray droplet spectra produced must be of a minimum Volume Median Diameter (VMD) of 200 microns.

Weed wipers may be used in any recommended crop where the wiper or chemical does not touch the growing crop.

When using weed wipers, the maximum concentrations used must not exceed the following:

Weed wiper Mini	1:2 dilution with water
Other Wipers	1:1 dilution with water

When applying to land temporarily removed from production, the maximum total dose must not exceed 6 litre product/hectare/year.

## RECOMMENDATION TABLES

AREA OF USE	CROP/SITUATION	TARGET WEEDS/ USAGE	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
PRE-HARVEST ARABLE CROPS	WINTER and SPRING WHEAT, DURUM WHEAT, WINTER and SPRING BARLEY and WINTER and SPRING OATS	Common Couch	1-25 shoots/m <sup>2</sup>	2.0	80-250 l/ha*	Grain/seed moisture must not exceed 30% at spraying.  Harvest intervals: CEREALS, PEAS, BEANS      7+ days OILSEED RAPE                14-21 days LINSEED                        14-28 days MUSTARDS                      8-10 days  Use high clearance, narrow wheeled tractors, wide booms and crop dividers.  DO NOT TREAT CROPS GROWN FOR SEED  Where desiccating crops, check susceptibility of any weeds present.  Do not attempt to desiccate OILSEED RAPE or MUSTARD crops with significant secondary growth, uneven maturity, disease or stress.  Desiccate LINSEED when seeds are light brown and capsules brown; stems/leaves may be yellow/green.  Consult grain merchant before treating crops grown on contract or intended for malt for distilling.  At Harvest Management rates, ANNUAL NETTLE, VOLUNTEER POTATO, ROSEBAY WILLOW HERB and POLYGONUM WEEDS will not be susceptible. WHEAT crops, WHEAT VOLUNTEERS and BROAD-LEAVED WEEDS may require up to 14 days before harvest.  Treated straw must not be used as a horticultural mulch.  * Rotary Atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns.
			Up to 75 shoots/m <sup>2</sup>	3.0		
			Over 75 shoots/m <sup>2</sup>	4.0		
			Up to 75 shoots/m <sup>2</sup>	3.0		
	OILSEED RAPE, MUSTARDS	Perennial broad- leaved weeds and other perennial grasses	Up to 75 shoots/m <sup>2</sup>	3.0	200-250 l/ha	
	COMBINING PEAS, FIELD BEANS		Over 75 shoots/m <sup>2</sup>	4.0		
			Up to 75 shoots/m <sup>2</sup>	3.0	80-250 l/ha*	
			Over 75 shoots/m <sup>2</sup>	4.0		
	LINSEED	Harvest Management	Up to 75 shoots/m <sup>2</sup>	3.0	80-250 l/ha	
	WINTER and SPRING WHEAT, DURUM WHEAT, WINTER and SPRING BARLEY and WINTER and SPRING OATS		Over 75 shoots/m <sup>2</sup>	4.0		
			All levels/species	4.0	80-250 l/ha*	
			All levels/species	4.0	200-250 l/ha	
		All levels/species	4.0	80-250 l/ha*		
OILSEED RAPE, MUSTARDS	Crop desiccation and annual weeds, prior to direct combining	All levels/species	4.0	200-250 l/ha		
COMBINING PEAS, FIELD BEANS		All levels/species	4.0	80-250 l/ha*		
LINSEED		All levels/species	4.0	80-250 l/ha		
WINTER and SPRING WHEAT, DURUM WHEAT, WINTER and SPRING BARLEY and WINTER and SPRING OATS	Harvest Management	Annual grasses, crop stems and leaves	1.0	80-250 l/ha*		
		Annual broad- leaved weeds	1.5			
OILSEED RAPE, MUSTARDS		All levels/species	3.0	200-250 l/ha		
LINSEED		All levels/species	3.0	80-250 l/ha		

AREA OF USE	CROP/ SITUATION	TARGET WEEDS/ USAGE	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
STUBBLES, PRE-SOWING and PRE-PLANTING.	BEFORE ALL CROPS EXCEPT ORCHARDS	Common Couch	Up to 75 shoots/m <sup>2</sup> Over 75 shoots/m <sup>2</sup>	3.0 4.0	80-250 l/ha*	Do not cultivate immediately before spraying. For PERENNIAL weed control, allow: - 21+ days growth before spraying in spring - VOLUNTEER POTATOES to make ample top growth - 5 days before cultivating or drilling For ANNUAL weed control, allow: - 24 hours before cultivating - 48 hours before direct drilling Allow 7 days before planting trees * Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns.
		Other perennial grasses; volunteer potatoes (autumn only)	All levels/species	4.0		
		Volunteer cereals and annual weeds	All levels/species	1.5		
	BEFORE ORCHARD PLANTING	Perennial grasses and broad-leaved weeds	Arable weeds Pasture weeds	4.0 5.0		
POST SOWING/PLANTING, PRE-EMERGENCE OF THE CROP	LISTED CEREALS, OILSEED RAPE, MUSTARD, LINSEED, PEAS, POTATOES, FIELD BEANS, SUGAR BEET, SWEDE, TURNIP, ONION and LEEK	Volunteer cereals and annual weeds	All levels/species	1.5	80-250 l/ha*	CAUTION - Ensure that spraying precedes ANY crop emergence.
	ASPARAGUS	Annual weeds	All levels/species	1.5		CAUTION - Ensure that spraying precedes ANY new spear emergence
		Perennial grasses Perennial broad-leaved weeds	4.0 5.0			
ALL EDIBLE AND NON- EDIBLE CROPS (DESTRUCTION, BEFORE SOWING/PLANTING).	Vegetation management	-	Annual weeds Perennial grasses Perennial broad- leaved weeds	1.5 4.0 5.0	80-250 l/ha* or hand-held equipment (p.15-16)	*Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns Do not use under polythene or glass. Do not use in or alongside hedgerows

AREA OF USE	CROP/ SITUATION	TARGET WEEDS/ USAGE	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE	
GREEN COVER ON LAND NOT BEING USED FOR CROP PRODUCTION EG "SET ASIDE"	BEFORE or DURING REMOVAL FROM PRODUCTION	Common Couch	Up to 75 shoots/m <sup>2</sup>	3.0	80-250 l/ha* or Hand-held equipment (p.8) or Tractor mounted weed wiper (p.16)	Before using on land taken out of production as part of a grant aided scheme, ensure compliance with the management rules of that scheme.  Do not 'top' or cultivate immediately before application.  For PERENNIAL weed control, allow:-  - 21+ days growth before spraying in spring  - 5 days before cultivating or drilling.  For ANNUAL weed control, allow:  - 24 hours before cultivating.  Do not direct drill after set-aside.  Avoid applications during stem elongation as reduced control and re-spray is likely  * Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns.	
			Over 75 shoots/m <sup>2</sup>	4.0			
		Perennial broad-leaved weeds and other perennial grasses	All levels/species	4.0			
			Annual weeds				
	AFTER SHORT ROTATION or LONG TERM REMOVAL FROM PRODUCTION	Natural regeneration and cover crop destruction		- Autumn/spring of year 1 only	All levels/species		1.5
				- Summer of year 1 and thereafter	All levels/species		3.0
				Annual weeds only			3.0
				Perennial grasses			4.0
		Perennial broad- leaved weeds		5.0			
		Perennial broad- leaved weeds as listed below: Common Ragwort Hard Rush Heath Rush Jointed Rush White clover Yellow Rattle		6.0			

GRASSLAND - DESTRUCTION	GRASS	Short rotation ryegrass, longer leys and permanent pasture	Short rotation ryegrass with annual weeds	3.0	150-250 l/ha	Treat EITHER before grazing/mowing in June-Oct, when growth is 30-60 cm, not dense and lacking mature seeds, OR regrowth after grazing/mowing.  Select the application rate which controls/destroys the least susceptible weed and grass species present in the sward.  Grass may be conserved or grazed by cattle, dairy cows or sheep 5+ days after spraying. REMOVE POISONOUS PLANTS BEFORE GRAZING/MOWING.  ONLY direct drill grass and clover EITHER into 1-2 year leys without mat, 5+ days after spraying, OR long leys with some mat, in the spring following autumn application.
			Leys 2-4 years old with perennial grass weeds	4.0		
			Long leys 4-7 years old with perennial broad-leaved weeds	5.0		
			Permanent Pasture	6.0		
			See Weed Table below			

APPLICATION RATE FOR GRASSLAND DESTRUCTION							
3.0 l/ha		4.0 l/ha		5.0 l/ha		6.0 l/ha	
Annual Meadow-grass	Meadow Fescue	Black-bent	Creeping Soft-grass	Bracken**	Red Clover	Common Ragwort	Nardus (Mat grass)
Common Chickweed	Meadow Foxtail	Broad-leaved Dock	Curled Dock	Common Sorrel	Sedges	Hard Rush	Red Fescue
Common Mouse-ear	Rough Meadow-grass	Cock's-foot	Perennial Rye-grass	Common Nettle	Sheep's Sorrel	Heath Rush	White Clover*
Dock Seedlings	Speedwell species	Common Bent	Plantains	Creeping Buttercup*	Soft Rush	Jointed Rush	Yellow Rattle
Italian Rye-grass	Timothy	Common Couch	Soft Brome	Creeping Thistle	Spear Thistle	Molinia (Purple Moor-grass)	Sheep's Fescue
Mayweed species		Creeping Bent	Yorkshire Fog	Daisy	Tufted Hairgrass		
				Dwarf Thistle	Yarrow		
				Perennial Sow-thistle			

\* White clover is best cut in June and sprayed one month later

\*\* At full frond expansion

AREA OF USE	CROP/SITUATION	TARGET WEEDS/ USAGE	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
ORCHARDS	APPLE, PEAR, PLUM, CHERRY, DAMSON	Perennial grasses, broad-leaved weeds	All levels of most species	5.0	200-400 l/ha	Spray AFTER autumn leaf-fall and BEFORE: Apples, Pears - Green cluster stage Stone fruit - White bud stage  Treat root suckers in late spring only.  Trees must have been established 2+ years. Avoid contact with tree 30+ cm above ground.
		Root suckers	-	5.0		
ENCLOSED WATERS, OPEN WATERS, LAND IMMEDIATELY ADJACENT TO AQUATIC AREAS	-	Emerged Weeds - Reeds, Rushes, Sedges, Grasses and Watercress	All levels/species	5.0	200-400 l/ha or hand-held equipment (p.15)	Consult appropriate Environment Agency regional office before use.  On water-lillies it is preferable to use a tractor or boat-mounted sprayer. During spraying do not exceed a pressure of 2.0 bars (30 p.s.i.). When using a tractor mounted sprayer do not exceed 8 kph (5mph).  Use boat-mounted sprayers at slowest practical speed. Always apply against direction of any current. When disturbed by wash, WATER-LILIES may require re-treatment.
		Floating Weeds - White water-lily - Yellow water-lily	All levels	6.0	100-200 l/ha or hand-held equipment (p.15)	

AREA OF USE	CROP/SITUATION	TARGET WEEDS/ USAGE	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
IN-CROP (TRACTOR-MOUNTED WEED WIPER APPLICATION)	ARABLE CROPS, GRASSLAND, SET ASIDE	Bolters, weed beet, other weeds	All levels	1:1 dilution with water OR 1:2 dilution with water in hot, dry conditions.  For 'new generation' wipers consult the manufacturer for guidance.		Weeds must be 10+ cm taller, and wiper 5+ cm higher, than desired vegetation.  Wipe dense populations twice, in opposite directions. BOLTING BEET requires three applications, 2 weeks apart, from early July to early August.  Contact Monsanto or your distributor for specific recommended weed wiper applicators.  Treated POISONOUS WEEDS must be removed or allowed to completely degenerate before grazing or conserving.

## Mixing and spraying

ROUNDUP BIACTIVE mixes readily with water and can be applied in spray volumes ranging from 80-400 l/ha using tractor mounted, knapsack, rotary atomisers and hand-held sprayers. Specialised application equipment such as weed wipers and spot gun applicators may be used where indicated.

Correctly calibrate all sprayers under field or use conditions prior to application.

### a) Tractor mounted and powered sprayers

These should be capable of applying accurately 80-400 l/ha within a pressure range of 1.5-2.5 bars (20-35 psi).

Half fill the spray tank with clean water, start gentle agitation, and then add the correct amount of ROUNDUP BIACTIVE. Top up the tank with water to the required level. To avoid foaming do not use top tank agitation. Use of a defoamer may be necessary.

#### *Medium Volume application (150-300 l/ha)*

Avoid high water volumes (>300 l/ha) which may lead to run-off from the treated vegetation, resulting in reduced control. Low drift nozzles such as air induction and pre-orifice types producing a medium or coarse spray (BCPC definition) should be used to minimise the risk of drift.

#### *Low Volume Application (minimum 80 l/ha)*

Low volume application can be achieved by reducing pressure and the appropriate nozzle selection. Low drift nozzles which produce a medium spray quality (BCPC definition) should be used to minimise the risk of drift.

### b) Knapsack sprayers

Recommended delivery range is 80 - 300 l/ha. Half fill the spray tank with clean water, add the correct amount of ROUNDUP BIACTIVE and top up with water. Fill according to best practice as given on the CPA's Voluntary Initiative website ([www.voluntaryinitiative.org.uk](http://www.voluntaryinitiative.org.uk))

When used at a walking speed of 1 m/sec to apply a swath of 1 m width, most knapsack sprayers fitted with a Lurmark AN 2.0 or similar nozzle deliver approximately 200 l/ha spray volume (or 10 l per 500 m<sup>2</sup>). To apply 4.0 l/ha of ROUNDUP BIACTIVE, therefore, use a 2.0% solution, i.e. 200ml ROUNDUP BIACTIVE made up to 10 litres. Similarly, knapsack sprayers fitted with low volume nozzles such as Lurmark AN 1.0 typically deliver approximately 100 l/ha spray volume. To apply 4.0 l/ha ROUNDUP BIACTIVE in this case use 4.0% solution.

c) Rotary Atomisers

When rotary atomisers are used to apply ROUNDUP BIACTIVE ensure that the droplet diameter falls within the range 200-300 microns for all uses.

Stir the correct amount of ROUNDUP BIACTIVE to control the particular target species into the sprayer bottle half filled with clean water. Top up with water, close the top and shake gently to ensure good mixing

d) Weed Wipers

For ropewick applicators use a concentration of 1 part ROUNDUP BIACTIVE to 2 parts of water and add a water-soluble dye if required. Care should be taken to avoid dripping onto wanted vegetation.

For new generation weed wipers, use 1 part Roundup Biactive to 10 or 20 parts of water or as directed by manufacturer's instructions. A list of machines is included in the Company Advisory section at the end of this label.

e) Spot Gun Applicators

Spot gun applicators are for the treatment of individual weeds. Apply 5 ml of spray to target weed, using a narrow cone TG-3 or TG-5 nozzle.

Spot Diameter (metres)	Amount of ROUNDUP BIACTIVE (ml) per 5 litres spray solution for targeted dosages of:		
	3.0 l/ha	4.0 l/ha	5.0 l/ha
0.3	20	28	35
0.6	85	110	140

Boat mounted sprayers

For use in aquatic situations. Prepare sprayer as for knapsack sprayers (Section b above). Calibrate and spray at the lowest speed possible. Always apply against the direction of any current.

## Compatibility

### Herbicides

ROUNDUP BIACTIVE is compatible with the following:

Alpha Chlorotoluron 500	Katamaran	Treflan
Ashlade CP	Katamaran + Treflan	Uranus
Basagran SG	Kerb Flo	Venzar Flowable
Batallion or Opogard	Liberator	
Bullet	Linuron 500	
Butisan S	Magnum	
Butisan S + Treflan	MCPA	
Carbetamex	Novall	
Centium	Pyramin DF	
Crystal (Ice, Trooper)	Ramrod Flowable	
Duplosan KV	Reflex T	
Dursban WG	Sencorex WG	
Fiesta T	Stomp 400 (Claymore)	
Flexidor 125	Takron	
Goltix WG	Tolugan 700	

N.B. Maintain continuous agitation when using ROUNDUP BIACTIVE in tank-mixture with these herbicides. Always consult manufacturers' recommendations before use.

The above list of compatible products was correct at the time of printing. For up to date information on compatible products contact Monsanto UK Ltd (tel: 01954 717575).

Do not tank-mix ROUNDUP BIACTIVE when using rotary atomiser sprayers.

## COMPANY ADVISORY INFORMATION

This section is not part of the Product Label under the Plant Protection Products Regulations 1995 and provides additional advice on the product.

### General Information

ROUNDUP BIACTIVE herbicide is an advanced formulation containing glyphosate. ROUNDUP BIACTIVE is taken up by foliage and translocated to underground roots, rhizomes and stolons, providing control of both annual and perennial grasses and broad-leaved weeds. ROUNDUP BIACTIVE is rapidly adsorbed onto particulate matter in soils and water and is quickly degraded by the micro-organisms present in soil and aquatic bottom sediments. Until degraded, the active ingredient in ROUNDUP BIACTIVE, glyphosate, is practically immobile in soils and is, therefore, unlikely to contaminate groundwater.

ROUNDUP BIACTIVE is a glyphosate formulation which, having no hazard classification, offers a high standard of operator safety. To maximise the intrinsic safety of ROUNDUP BIACTIVE to operator, consumer and environment, the label recommendations and the DEFRA/HSC/NAW publication "Code of Practice for Using Plant Protection Products" of January 2006, should be adhered to.

### Symptoms on the weeds

Symptoms of treatment are generally first seen 7-14 days, or longer, if growth is slow after spraying. Leaf symptoms take the form of a reddening then yellowing of the foliage and are first seen on the grass weeds but take longer to appear on broad-leaved weeds. Reaction of nettle is slow.

For aquatic weed control, on reeds and grasses leaf symptoms usually appear within 14-21 days of spraying in the early autumn. Complete foliage desiccation usually occurs 30-40 days after spraying. At this stage the reeds can be cut and removed. During cold conditions leaf symptoms may not appear before natural dieback but no growth will occur in the season following spraying.

### Effects of weather

See Directions for Use (Restrictions).

Roundup BIACTIVE will remain efficacious at low but not freezing temperatures however the onset of symptoms will be delayed.

A covering of dew may reduce efficacy where run-off occurs.

Reduced control is likely where weed growth is impaired by natural senescence, drought, high temperature, a covering of dust, flooding or severe/prolonged frost at, or immediately after application.

### **General Cautions**

Take extreme care to avoid drift, particularly when using near or alongside hedgerows. The use of low drift nozzles such as 'air induction' and 'pre-orifice' nozzles are recommended.

After application, large concentrations of decaying foliage, stolons, roots or rhizomes should be dispersed or buried by thorough cultivation before crop drilling.

### **New generation weedwipers**

Logic Contact 2000  
Carrier Rollmaster  
Allman Ecowipe  
Rotowiper (UK) Ltd  
C-Dax™ Eliminator  
Weedswiper™

### **Disposal**

Follow the guidance on the disposal of surplus spray solution, tank washings, concentrate and containers as given in the DEFRA/HSC/NAW publication "Code of Practice for Using Plant Protection Products" of January 2006.

### **Sprayer hygiene**

It is essential to thoroughly clean-out spray tanks, pumps and pipelines and nozzle or disc assemblies, with a recommended detergent cleaner, between applying this product and other pesticides to avoid contamination from pesticide residues.

### **Environmental Information Sheet**

An Environmental Information Sheet for this product is available from the CPA's Voluntary Initiative website ([www.voluntaryinitiative.org.uk](http://www.voluntaryinitiative.org.uk))

### **Trade Mark References**

Biactive® is a registered trade mark of Monsanto Technology LLC.  
Roundup®, Monsanto® and the vine symbol are registered trade marks of Monsanto Technology LLC.  
All other brand names referred to are trade marks of other manufacturers in which proprietary rights may exist.

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